



## Czero, Inc.

### Job Opening – Controls Engineer: Embedded Controls Specialist

Posting#: 2019-004

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**Date of posting:** January 29, 2019

**Location:** Fort Collins, Colorado 80524

**Time commitment:** Full Time

**Travel requirements:** Possible occasional travel for onsite work with clients

**Reporting structure:** Reports to Lead Controls Engineer

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#### JOB DESCRIPTION

Czero seeks an experienced Controls Engineer with deep expertise in software and programming for developing embedded systems for complex machines. The engineer in this role will work as part of an agile, highly collaborative R&D team that designs and develops prototype systems in advanced automotive, oil and gas, clean tech, aerospace, transportation and other industries.

At Czero we work on a wide variety of projects, for companies large and small, innovating new, and further developing existing mechanical, electromechanical, and electrohydraulic systems and subsystems. We specialize in the engineering, design and development of first and second stage prototype systems, using our skills to deliver innovative and efficient solutions to our customers. In a given day, our projects may include powertrain systems, mobile and industrial hydraulics, large scale system integration, and packaging of precision laboratory instrumentation, to name a few. If you join us, you will work hard, play hard, and as a member of the team, strive to bring the best to every project, building fully satisfied customers through delivery excellence.

In our R&D work, we frequently develop embedded controls systems and subsystems; including:

- Rapid controls prototyping (RCP) of real-time systems
- Development of automotive controls and testing systems
- System integration of industrial and process controls
- Test system development including data acquisition
- Developing supervisory control and data acquisition (SCADA) systems
- Generation of system validation plans and their execution

## QUALIFICATIONS

### Education

Bachelor's degree in mechanical or electrical engineering with specialization in controls (advanced degree preferred).

### Experience required

5+ years of experience developing embedded controls systems.

### Essential for this position

- Expertise in all phases of embedded software development. Practical knowledge in developing controls algorithms in C/C++ and MATLAB/Simulink for a wide range of targets.
- Working knowledge with various automotive and industrial communication protocols such as Modbus, CAN, or EtherCAT.
- Experienced in controls development utilizing either LabVIEW and National Instruments hardware, or PLC hardware utilizing the IEC 61131-3 programming standard.
- Proficiency in controls design, software development, embedded code generation, data analysis.
- Ability to apply skills to modeling, simulation, code development, and implementation in the test cell and laboratory.
- Strong verbal and written communication and interpersonal skills.
- A passionate interest, shared with everyone on the Czero team, in developing profitable innovations that make a positive global impact.
- Commitment to Czero's goals and a desire for continuous improvement.

### Representative tasks

- Work with clients and other stakeholders to define system objectives and specifications.
- Develop new concepts and designs to solve challenging R&D projects.
- Develop control solutions for diverse devices, machines and applications that incorporate various control strategies.
- Select and implement hardware (rapid prototyping systems, data acquisition, PLCs, etc.) and software platforms to support desired architecture.
- Develop and test algorithms to meet system objectives.
- Model systems to determine expected performance.
- Apply established tools for software documentation, adherence to requirements, version control, and meeting system objectives for performance and quality.
- Hands-on testing, validation and implementation of control systems in laboratory environments and in the field.

### Additional consideration given to those with experience in these areas

- Automotive, oil and gas, aerospace, heavy industrial or clean tech industries.
- Development of new hybrid architectures and intelligent control systems to update traditional technologies for higher performance and greater efficiency.

### Residency requirements

- U.S. citizenship or the ability to satisfy U.S. Department of Justice work requirements without assistance from Czero

## The right fit for our team

Beyond technical ability, we're looking for someone who is smart, creative, innovative, hardworking, able to handle multiple projects at a time, and tenacious when it comes to a tough challenge. Everyone at Czero enjoys the challenge of tackling hard problems and is willing to put in the time and effort to solve them. Additionally, we have a true team environment, so it's crucial that you can collaborate effectively with diverse team members.

If you join our extended team, you will find Czero an interesting, challenging, and rewarding place to work. Your contributions will make a significant impact on high-profile projects that are positive for our clients, the environment and the economy.

## HOW TO APPLY

Please email a PDF of your cover letter and résumé to [careers@czero-solutions.com](mailto:careers@czero-solutions.com)

## ABOUT CZERO

An established, fast-growing mechanical engineering firm located in Fort Collins, CO, Czero specializes in early-stage R&D in the areas of automotive, commercial vehicles, oil and gas, and clean technologies for local and global companies. Our team takes on wide-ranging engineering challenges for both private and public sector clients, developing new technologies and delivering high quality proof-of-concept prototype systems. We are passionate about the environment, and our work centers on scalable, cost-effective solutions to increase energy efficiency, improve energy storage and delivery, and decrease harmful emissions.

Czero has a strong network of partner companies, suppliers, and university collaboration partners, including the Colorado State University (CSU) Energy Institute, often working with university researchers on cutting edge technology development. If you join our team, you will find Czero an interesting, challenging, and rewarding place to work. Your contributions will make a significant impact on high-profile projects that are positive for our clients, the environment, and the economy.

## RECRUITERS

Please do not contact us regarding this or other positions at Czero; we already have an established relationship with a great recruiting team. Thanks!